Claims

What is claimed is:

1   1.   A method for implementing enhanced proxy Address
2   Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses
3   comprising:
4   identifying a Virtual Internet protocol (IP) interface requiring proxy
5   ARP;
6   dynamically selecting a proxy agent for said Virtual Internet protocol
7   (IP) interface;
8   adding an IP address for said Virtual Internet protocol (IP) interface to
9   an address list of a physical adapter for said selected proxy agent;
10   utilizing said physical adapter for said selected proxy agent, and
11   broadcasting said added IP address for said Virtual Internet protocol (IP)
12   interface with a media access control (MAC) address of said physical
13   adapter for said selected proxy agent.

1   2.   A method for implementing enhanced proxy Address
2   Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as
3   recited in claim 1 further includes identifying a broadcast ARP response for
4   said Virtual Internet protocol (IP) interface, and continuing activation for said
5   Virtual Internet protocol (IP) interface including enqueuing said Virtual
6   Internet protocol (IP) interface to a proxy list of said selected proxy agent.

1   3.   A method for implementing enhanced proxy Address
2   Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as
3   recited in claim 1 further includes setting an associated local IP address of
4   said selected proxy agent in said Virtual Internet protocol (IP) interface.

1   4.   A method for implementing enhanced proxy Address
2   Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as
3   recited in claim 1 wherein the step of dynamically selecting said proxy agent
4   for said Virtual Internet protocol (IP) interface includes providing
5   Transmission Control Protocol/Internet Protocol (TCP/IP) code for
6   dynamically selecting said proxy agent.

1	5. A method for implementing enhanced proxy Address
2	Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as
3	recited in claim 1 wherein said selected proxy agent fails; and a new proxy
4	agent is dynamically selected for said Virtual Internet protocol (IP) interface
5	by Transmission Control Protocol/Internet Protocol (TCP/IP) code.

1	6. A method for implementing enhanced proxy Address
2	Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as
3	recited in claim 1 wherein the step of dynamically selecting said proxy agent
4	for said Virtual Internet protocol (IP) interface includes checking for a proxy
5	agent in the same subnet as said Virtual Internet protocol (IP) interface.

1	7. A method for implementing enhanced proxy Address
2	Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses as
3	recited in claim 1 further includes answering ARP requests for Virtual
4	Internet protocol (IP) addresses with Transmission Control Protocol/Internet
5	Protocol (TCP/IP) code for said selected proxy agent for said Virtual Internet
6	protocol (IP) interface.

1	8. Apparatus for implementing enhanced proxy Address
2	Resolution Protocol (ARP) for Virtual Internet protocol (IP) addresses
3	comprising:
4	a local network;
5	a server computer having a Virtual Internet protocol (IP) address and
6	a plurality of physical adapters connecting said server computer to said local
7	network,
8	a Transmission Control Protocol/Internet Protocol (TCP/IP) code for
9	dynamically selecting a proxy agent for said Virtual Internet protocol (IP)
10	interface;
11	a proxy ARP for Virtual IP interface initiation task for adding an IP
12	address for said Virtual Internet protocol (IP) interface to an address list of
13	an associated one of said physical adapters for said selected proxy agent;
14	and for utilizing said physical adapter for said selected proxy agent for
15	broadcasting said added IP address for said Virtual Internet protocol (IP)
16	interface with a media access control (MAC) address of said physical
17	adapter for said selected proxy agent.

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1   9.   Apparatus for implementing enhanced proxy Address
2 Resolution Protocol (ARP) as recited in claim 8 wherein said TCP/IP code is
3 responsive to a failure of said physical adapter for said selected proxy agent,
4 for dynamically selecting a new proxy agent for said Virtual Internet protocol
5 (IP) interface.

1   10.   Apparatus for implementing enhanced proxy Address
2 Resolution Protocol (ARP) as recited in claim 8 wherein said TCP/IP code
3 answers ARP requests to said Virtual Internet protocol (IP) address; said
4 ARP requests being provided without a parameter defining an associated
5 local interface being specified with said ARP requests to said Virtual Internet
6 protocol (IP) address.

1   11.   Apparatus for implementing enhanced proxy Address
2 Resolution Protocol (ARP) as recited in claim 8 includes a input/output
3 processor (IOP) response handler task for identifying a broadcast ARP
4 response for said Virtual Internet protocol (IP) interface, and for continuing
5 activation for said Virtual Internet protocol (IP) interface including enqueuing
6 said Virtual Internet protocol (IP) interface to a proxy list of said selected
7 proxy agent.

1   12.   Apparatus for implementing enhanced proxy Address
2 Resolution Protocol (ARP) as recited in claim 11 wherein said IOP response
3 handler task is adapted for setting an associated local IP address of said
4 selected proxy agent in said Virtual Internet protocol (IP) interface to
5 complete activation for said Virtual Internet protocol (IP) interface.

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1   13.   A computer program product for implementing enhanced proxy

2   Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

3   addresses in a server computer, said computer program product including

4   instructions executed by the server computer to cause the server computer

5   to perform the steps of:

6   identifying a Virtual Internet protocol (IP) interface requiring proxy

7   ARP;

8   dynamically selecting a proxy agent for said Virtual Internet protocol

9   (IP) interface;

10   adding an IP address for said Virtual Internet protocol (IP) interface to

11   an address list of a physical adapter for said selected proxy agent;

12   utilizing said physical adapter for said selected proxy agent, and

13   broadcasting said added IP address for said Virtual Internet protocol (IP)

14   interface with a media access control (MAC) address of said physical

15   adapter for said selected proxy agent.

1   14.   A computer program product for implementing enhanced proxy

2   Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

3   addresses as recited in claim 13 further includes the step of identifying a

4   broadcast ARP response for said Virtual Internet protocol (IP) interface, and

5   continuing activation for said Virtual Internet protocol (IP) interface including

6   enqueuing said Virtual Internet protocol (IP) interface to a proxy list of said

7   selected proxy agent.

1   15.   A computer program product for implementing enhanced proxy

2   Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

3   addresses as recited in claim 14 further includes the step of setting an

4   associated local IP address of said selected proxy agent in said Virtual

5   Internet protocol (IP) interface to complete activation for said Virtual Internet

6   protocol (IP) interface.

1   16.   A computer program product for implementing enhanced proxy

2   Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

3   addresses as recited in claim 13 wherein Transmission Control

4   Protocol/Internet Protocol (TCP/IP) code is used for the step of dynamically

5   selecting said proxy agent for said Virtual Internet protocol (IP) interface.

1   17.   A computer program product for implementing enhanced proxy

2   Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

3   addresses as recited in claim 16 wherein said Transmission Control

4   Protocol/Internet Protocol (TCP/IP) code is responsive to a failure of said

5   physical adapter for said selected proxy agent, for dynamically selecting a

6   new proxy agent for said Virtual Internet protocol (IP) interface.

1   18.   A computer program product for implementing enhanced proxy

2   Address Resolution Protocol (ARP) for Virtual Internet protocol (IP)

3   addresses as recited in claim 16 wherein said Transmission Control

4   Protocol/Internet Protocol (TCP/IP) code utilizes said physical adapter for

5   said selected proxy agent for answering ARP requests to said Virtual

6   Internet protocol (IP) address; said ARP requests being provided without a

7   parameter defining an associated local interface being specified with said

8   ARP requests to said Virtual Internet protocol (IP) address.